UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,737	11/17/2003	Vivek Jaiswal	P17144	4377

46915 7590 11/27/2007

KONRAD RAYNES & VICTOR, LLP.
ATTN: INT77
315 SOUTH BEVERLY DRIVE, SUITE 210
BEVERLY HILLS, CA 90212

EXAMINER	
KEEFER, MICHAEL E	

ART UNIT	PAPER NUMBER
2154	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/715,737	JAISWAL ET AL.	
	Examiner	Art Unit	
	Michael E. Keefer	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed 9/28/2007.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-7, 14-20, and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hare et al. (US 2003/0167338), hereafter Hare, in view of Angel et al. (US 2004/0044789), hereafter Angel.

Regarding **claims 1, 13, and 26**, Hare discloses:

A method for transmitting packets between a plurality of end user systems and one server, comprising:

in response to receiving an initial packet from an initiating end user system, communicating with the server to establish a network session and obtain a network session identifier; ([0022] lines 1-6 disclose a end user system sending data (i.e. a packet) to a gateway, which then sets up a PPPoE session with the server. [0031] discloses that a unique session ID is generated for that client's session)

adding an entry to a data structure associating a connection with the end user system and the network session identifier; ([0031] discloses that the unique ID can be used by the PPP client layer in the gateway to determine the source/destination of a frame; in order to do so an association between the unique ID and the client it belongs to must inherently be stored in some form of data structure.)

in response to receiving a data packet from one transmitting end user system, processing the data structure to determine the network session identifier associated with the connection to the transmitting end user system; ([0031] discloses that the PPP client layer uses the session ID to determine the source/destination (i.e. the proper network session that the frame belongs to) for data transmitted from the client.)

and communicating the data packet from the transmitting end user system to the server using the network session corresponding to the network session identifier. ([0032] discloses sending data from the non-PPPoE client to the access concatenator using PPPoE (which uses the unique session ID as shown above))

Regarding **claims 2, 15, and 27 and as applied to claims 1, 14, and 26**, Hare discloses:

encapsulating the data packet from the transmitting end user system with a header including the determined network session identifier, wherein the encapsulated data packet is transmitted to the server. (Hare discloses in [0037] encapsulating the data packets from client 132 into PPPoE frames (which inherently include the aforementioned unique session ID))

Regarding **claims 3, 16, and 28, and as applied to claims 1, 14, and 26**, Hare discloses:

in response to receiving a data packet from the server, determining one network session identifier included with the received data packet; determining from the data structure the Connection to one end user system associated with the determined network session identifier; and transmitting the data packet on the determined

connection to one end user system. ([0030] discloses the process whereby a packet from the access concatenator (i.e. the server) is stripped of the PPPoE data and forwarded to the end user system 132, again using the unique session ID as disclosed in [0031].)

Regarding **claims 4, 17, and 29 and as applied to claims 1, 3, 14, 16, 26, and 28** Hare discloses:

wherein the network session identifier is included within a header encapsulating the data packet from the server, further comprising:

removing the header and network session identifier from the data packet, wherein the extracted data packet is transmitted on the determined connection. ([0030] discloses the process whereby a packet from the access concatenator (i.e. the server) is stripped of the PPPoE data and forwarded to the end user system 132, again using the unique session ID as disclosed in [0031].)

Regarding **claims 5, 18, and 30 and as applied to claims 1, 3-4, 14, 16-17, 26, and 28-29**, Hare discloses:

wherein the data packet received from the end user system is encapsulated in a Point-to-Point Protocol (PPP) packet and the connection with the end user system comprises a standard telephone line and wherein the data packet from the server is encapsulated in a PPP over Ethernet (PPPOE) packet having a header including the network session identifier of the PPPOE network session over which the PPPOE packet was transmitted. (Hare discloses that client 132 is any client unable of supporting the PPPOE protocol. Hare similarly discloses that the access concatenator

(i.e. the server) only supports the PPPOE protocol. (See [0021]) In addition, Hare, in the last 5 lines of [0030] states that the PPP (and not PPPoE data) may be provided to the client 132, clearly implying that the client, while unable to support PPPoE, is able to support a PPP session with the gateway. [0018] discloses that network 120 may be a variety of networks, for instance, a private network (i.e. a telephone line.))

Regarding **claims 6, 19, and 31 and as applied to claims 1, 14, and 26**, Hare discloses:

wherein one network session identifier is obtained from the server for each connection to one end user computer. ([0031] discloses that in one embodiment each client 132 has its own PPPoE session, and thus its own unique session ID.)

Regarding **claims 7, 20, and 32, and as applied to claims 1, 14, and 26**, Hare discloses:

the server comprises an Internet Service Provider (ISP) server and wherein the end user computer communicates with the ISP server to access a network through the ISP server. (an access concatenator is an ISP server, which allows access to network 160 see Fig. 1)

Hare discloses all the limitations of claims 1-7, 14-20, and 26-32 except for:

The data structure associating ports with connection ids ("associating a port of a connection with the end user system and the network session identifier")

And the use of that data structure to determine the proper session id for the communication.

The general concept of using a table to associate user ports with network session Ids and using it as a lookup table to facilitate communication between networks that use different communication protocols is well known in the art as taught by Angel. (See the first configuration listed in Fig. 6, also see Table 1 on page 5, following paragraph 107, which shows a table associating a port with a PPPoE session ID.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Hare with the general concept of using a table to associate user ports with network session Ids and using it as a lookup table to facilitate communication between networks that use different communication protocols as taught by Angel in order to support PPPoA (PPP over ATM) clients more efficiently.

4. Claims 8-13, 21-25, and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hare in view of Voit et al. (US 2002/0044567), hereafter Voit in further view of Angel.

Regarding claims 8-13, 21-25, and 33-37, Hare discloses:

Regarding **claims 8, 21, and 33**, Hare discloses:

A method for transmitting packets between a plurality of end user systems and one server, comprising:

communicating the data packet from the transmitting end user system to the server using the network session corresponding to the network session identifier. ([0032] discloses sending data from the non-PPPoE client to the access concatenator using PPPoE (which uses the unique session ID as shown above))

Regarding **claims 9, 22, and 34 and as applied to claims 8, 21, and 33**, Hare discloses:

encapsulating the data packet from the transmitting end user system with a header including the determined network session identifier, wherein the encapsulated data packet is transmitted to the server. (Hare discloses in [0037] encapsulating the data packets from client 132 into PPPoE frames (which inherently include the aforementioned unique session ID))

Regarding **claims 10, 23, and 35, and as applied to claims 8, 21, and 33**, Hare discloses:

in response to receiving a data packet from the server, determining the network address included with the received data packet; determining from the data structure the connection to one end user system associated with the determined network address; and transmitting the data packet on the determined connection to one end user system. ([0030] discloses the process whereby a packet from the access concatenator (i.e. the server) is stripped of the PPPoE data and forwarded to the end user system 132, again using network address in the packet.)

Regarding **claims 11, 24, and 36 and as applied to claims 8, 10, 21, 23, 33, and 35** Hare discloses:

wherein the network session identifier is included within a header encapsulating the data packet from the server, further comprising:

removing the header and network session identifier from the data packet, wherein the extracted data packet is transmitted on the determined connection. ([0030]

discloses the process whereby a packet from the access concatenator (i.e. the server) is stripped of the PPPoE data and forwarded to the end user system 132, again using the unique session ID as disclosed in [0031].)

Regarding **claims 12, 25, and 37 and as applied to claims 8, 10-11, 21, 23-24, 33, and 35-36**, Hare discloses:

Wherein the network address comprises an IP address, wherein the data packet received from the end user system is encapsulated in a Point-to-Point Protocol (PPP) packet and the connection with the end user system comprises a standard telephone line and wherein the data packet from the server is encapsulated in a PPP over Ethernet (PPPOE) packet having a header including the network session identifier of the PPPOE network session over which the PPPOE packet was transmitted. (Hare discloses that client 132 is any client unable of supporting the PPPOE protocol. Hare similarly discloses that the access concatenator (i.e. the server) only supports the PPPOE protocol. (See [0021]) In addition, Hare, in the last 5 lines of [0030] states that the PPP (and not PPPoE data) may be provided to the client 132, clearly implying that the client, while unable to support PPPoE, is able to support a PPP session with the gateway. [0018] discloses that network 120 may be a variety of networks, for instance, a private network (i.e. a telephone line.) Hare discloses the use of an IP stack in the gateway for embodiments where client 132 is in an IP network)

Regarding **claims 13 and 38 and as applied to claims 8 and 33**, Hare discloses:

wherein the operations of assigning the network address, adding the entry to the data structure, determining one network session identifier and communicating the data packet are performed in a system separate from the server and terminating on one end of the connections to the end user systems. (See Fig. 1, the gateway is separate from access concatenator and is on one end of the end user systems.)

Hare discloses all the limitations of claims 8-13, 21-25, and 33-37 except for:

in response to receiving an initial packet from an initiating end user system, assigning a network address to the end user system;

adding an entry to a data structure associating a connection with the end user system and the network address assigned to the end user system;

determining one network session identifier of a network session on which data packets from multiple end user systems are transmitted to the server.

Voit teaches:

in response to receiving an initial packet from an initiating end user system, assigning a network address to the end user system; (Fig. 8, note the teaching of using a DHCP server to assign an address to the device)

adding an entry to a data structure associating a connection with the end user system and the network address assigned to the end user system; (Fig. 8, note the teaching of setting up a routing table in the CPE (i.e. gateway) using the assigned network address of the end user system.)

determining one network session identifier of a network session on which data packets from multiple end user systems are transmitted to the server. (Voit teaches the

use of the gateway as a PPPoE proxy server where all end-user transmissions are sent via one PPPoE connection. See [0191])

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Hare with Voit in order to facilitate finer gradation of services within the local network. (Voit, [0034])

Hare and Voit teach all the limitations of claims 8-13, 21-25, and 33-37 except for:

Establishing a tunnel with a session identifier between the protocol manager and the server.

Authenticating a user with the server through the protocol manager.

Angel teaches:

Establishing a tunnel with a session identifier between the protocol manager and the server. (See Fig. 2B, each tunnel inherently has a session identifier because they are PPPoE "tunnels".)

Authenticating a user with the server through the protocol manager. ([0077] indicates that the aggregator (i.e. concatenator or protocol manager) does an authentication phase with the user. Furthermore, [0077] teaches that the session is restarted after authentication towards the edge router (i.e. the server), which means inherently the aggregator has sent the user the appropriate network address associated with the edge router for the connection.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hare and Voit with Angel in order to provide different qualities of service to different users based off of their needs.

Response to Arguments

5. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Keefer whose telephone number is (571)

270-1591. The examiner can normally be reached on Monday through Friday 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

NATHAN FLYNN
SUPERVISORY PATENT EXAMINER

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEK 11/23/2007